



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/764,571	01/27/2004	Alain Gauthier	713-1029	9023

22429 7590 01/26/2006

LOWE HAUPTMAN GILMAN AND BERNER, LLP
1700 DIAGONAL ROAD
SUITE 300 /310
ALEXANDRIA, VA 22314

EXAMINER

REESE, DAVID C

ART UNIT	PAPER NUMBER
----------	--------------

3677

DATE MAILED: 01/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/764,571	Applicant(s) GAUTHIER, ALAIN	
	Examiner David C. Reese	Art Unit 3677	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 8-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action is in response to Applicant's RCE filed 11/14/2005.

Status of Claims

[1] Claims 1-6, 8-21 are pending.

Claim Objections

[2] Claim 1 recites the limitations "the other end," "the same direction," and "the walls" in the instant claim. There is insufficient antecedent basis for these limitations in the claim.

Claim 8 recites the limitation "the same direction" in the instant claim. There is insufficient antecedent basis for this limitation in the claim.

Claim 9 recites the limitation "the other" in the instant claim. There is insufficient antecedent basis for this limitation in the claim.

Claim 13 recites the limitation "the respective" in the instant claim. There is insufficient antecedent basis for this limitation in the claim.

Claim 17 recites the limitation "the same direction" in the instant claim. There is insufficient antecedent basis for this limitation in the claim.

Claim 19 recites the limitation "the respective" in the instant claim. There is insufficient antecedent basis for this limitation in the claim.

Claim 21 recites the limitation "the angle" in the instant claim. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

[3] The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

[4] Claims 1, 3-4, 6, 8-14, and 16-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over West et al. US-6,354,779, in view of Mulroy et al., US-6,113,321.

Although the invention is not identically disclosed or described as set forth 35 U.S.C. 102, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a designer having ordinary skill in the art to which said subject matter pertains, the invention is not patentable.

As for Claim 1, West et al. teaches of an anchor for friable material, said anchor comprising

a roughly cylindrical body (222 in Fig. 7B)

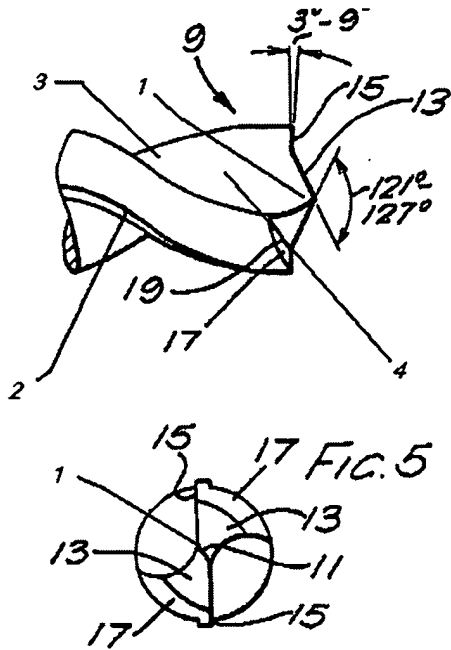
a drilling portion (below 204 in Fig. 7B) provided, at a free end of the body, with drilling teeth (three teeth below 204 in Fig. 7B),

a bearing flange (212 in Fig. 7B) at the other end of the body;

and an external screw thread (threads between 222 in Fig. 7B) wound around the body (222 in Fig. 7B) in one direction;

the drilling portion (below 204 in Fig. 7B) being configured as a portion of a drill bit, wherein the drill bit portion (below 204 in Fig. 7B) has two helical flutes (204 on the right, and the other on the upper left in Fig. 7B) in the same direction as the external screw thread (between 222 in Fig. 7B), each of said flutes opening onto a single flat surface (below 204 on the right, and the other on the left in Fig. 7B) forming a wall.

The difference between the claim and West et al. is the claim recites: that the flat surface of the flute forms the walls of both a central drilling tooth and one of two lateral drilling teeth. Mulroy et al. discloses a drilling portion similar to that of West et al. In addition, Mulroy et al. further teaches of each of flutes (3 in the Figure below) opening onto a flat surface (4) forming the walls of both a central drilling tooth (1) and one of two lateral drilling teeth (15). It would have been obvious to one of ordinary skill in the art, having the disclosures of West et al. and Mulroy et al. before him at the time the invention was made, to modify the drilling portion of West et al. to have the flat surface of the flute opening form the walls of both a central drilling tooth and one of two lateral drilling teeth as in Mulroy et al. One would have been motivated to make such a combination because such a configuration of the drilling portion allows a more concrete engagement of a work piece and thereby allowing a more efficient drilling event.



Re: Claim 3, West et al. teaches of a body that is hollow and pierced with a bore (114 in Fig. 3).

Art Unit: 3677

Re: Claim 4, Mulroy et al. discloses wherein said drilling portion further comprises two drill bit ribs (2) bordering said flutes (3), each of said ribs (2) forming one of said lateral drilling teeth (15).

Re: Claim 6, West et al. teaches of a body that is hollow and pierced with a bore (114 in Fig. 3).

As for Claim 8, West et al. teaches of an anchor for friable material, said anchor comprising

- a shank (203);

- a head (212) formed at an upper end of said shank;

- a drilling portion (204) formed at a lower end of said shank; and

- a plurality of external threads (threads between 222 in Fig. 7B) which helically coil about said shank between said head (212) and said drilling portion (204);

- wherein said drilling portion (204) comprises

- two helical flutes (204 on the right, and the other on the upper left in Fig. 7B) in the same direction as the external threads (threads between 222 in Fig. 7B),

The difference between the claim and West et al. is the claim recites: of a central drilling tooth having opposing flat surfaces; and each of said flutes ending at one of said flat surfaces of said central drilling tooth and that said drilling portion further comprises two lateral drilling teeth on opposite sides of said central drilling tooth, each of said lateral drilling teeth having a flat surface being coplanar with one of the flat surfaces of said central drilling tooth.

Mulroy et al. discloses a drilling portion similar to that of West et al. In addition, Mulroy et al. further teaches of each of said flutes (3 in Figure above) opening onto a flat surface (4)

Art Unit: 3677

forming the wall of a central drilling tooth (1) and of one of two lateral drilling teeth (15).

Further, Mulroy et al. discloses wherein said drilling portion further comprises two lateral drilling teeth (15) on opposite sides of said central drilling tooth (1), each of said lateral drilling teeth (15) having a flat surface being coplanar with one of the flat surfaces of said central drilling tooth (1).

It would have been obvious to one of ordinary skill in the art, having the disclosures of West et al. and Mulroy et al. before him at the time the invention was made, to modify the drilling portion of West et al. to have the flat surface of the flute opening form the wall of a central drilling tooth as in Mulroy et al. One would have been motivated to make such a combination because such a configuration of the drilling portion allows a more concrete engagement of a work piece and thereby allowing a more efficient drilling event.

Re: Claim 9, Mulroy et al. discloses wherein said drilling portion further comprises two drill bit ribs (2) bordering said flutes (3), each of said ribs (2) forming one of said lateral drilling teeth (15).

Re: Claim 10, Mulroy et al. further teaches of a flat surface of the central drilling tooth (1) extends laterally to define the flat surface of only one of said lateral drilling teeth (15), and the rib (2) that forms the other of said lateral drilling teeth (15) defines a raised border of said central drilling tooth (11) on said flat surface.

Re: Claim 11, Mulroy et al. further teaches wherein each of said flat surfaces of the central drilling tooth (1) extends laterally to define the flat surface of only one of said lateral drilling teeth (15).

Art Unit: 3677

Re: Claim 12, Mulroy et al. further teaches wherein each of said flat surfaces of the central drilling tooth (1) extends downwardly to an pointed end of said central drilling tooth (1) which pointed end is a lowermost point of said anchor.

Re: Claim 13, Mulroy et al. further teaches wherein each of said flutes (3) ends abruptly at the respective flat surface of the central drilling tooth (1).

Re: Claim 14, Mulroy et al. teaches wherein said flat surfaces of the central drilling tooth (1) define four cutting edges.

Re: Claim 16, West et al. teaches of a shank that is hollow and pierced with a bore (114 in Fig. 3).

As for Claim 17, West et al. teaches of a anchor for friable material, said anchor comprising

- a shank (203);

- a head (212) formed at an upper end of said shank;

- a drilling portion (204) formed at a lower end of said shank; and

- a plurality of external threads (threads between 222 in Fig. 7B) which helically coil about said shank between said head (212) and said drilling portion (204);

- wherein said drilling portion (204) comprises

- two helical flutes (204 on the right, and the other on the upper left in Fig. 7B) in the same direction as the external threads (threads between 222 in Fig. 7B),

The difference between the claim and West et al. is the claim recites: of a central drilling tooth having opposing flat surfaces; and each of said flutes ending at one of said flat surfaces of said central drilling tooth and that said drilling portion further comprises two lateral drilling teeth

Art Unit: 3677

on opposite sides of said central drilling tooth, each of said lateral drilling teeth having a flat surface which is a continuous extension of one of the flat surfaces of said central drilling tooth, and which extends seamlessly without interruption into said one of the flat surfaces of said central drilling tooth.

Mulroy et al. discloses a drilling portion similar to that of West et al. In addition, Mulroy et al. further teaches of each of said flutes (3 in figure above) opening onto a flat surface (4) forming the wall of a central drilling tooth (1) and of one of two lateral drilling teeth (15). Further, Mulroy et al. discloses wherein said drilling portion further comprises two lateral drilling teeth (15) on opposite sides of said central drilling tooth (1), each of said lateral drilling teeth (15) having a flat surface which is a continuous extension of one of the flat surfaces of said central drilling tooth (1), and which extends seamlessly without interruption into said one of the flat surfaces of said central drilling tooth (1).

It would have been obvious to one of ordinary skill in the art, having the disclosures of West et al. and Mulroy et al. before him at the time the invention was made, to modify the drilling portion of West et al. to have the flat surface of the flute opening form the wall of a central drilling tooth as in Mulroy et al. One would have been motivated to make such a combination because such a configuration of the drilling portion allows a more concrete engagement of a work piece and thereby allowing a more efficient drilling event.

Re: Claim 18, Mulroy et al. discloses wherein each of said flat surfaces of the central drilling tooth (1) extends downwardly to an pointed end of said central drilling tooth (1) which pointed end is a lowermost point of said anchor.

Art Unit: 3677

Re: Claim 19, Mulroy et al. discloses wherein each of said flutes (3) ends abruptly at the respective flat surface of the central drilling tooth (1).

Re: Claim 20, Mulroy et al. discloses wherein said flat surfaces of the central drilling tooth (1) define four cutting edges.

Re: Claim 21, Mulroy et al. discloses wherein the angle between said walls is zero (the angle between 1 and 15 in the second figure, figure 5, above).

[5] Claims 2, 5, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over West et al. US-6,354,779, in view of Mulroy et al., US-6,113,321, and further in view of Carlson et al, US-4,157,674.

Although the invention is not identically disclosed or described as set forth 35 U.S.C. 102, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a designer having ordinary skill in the art to which said subject matter pertains, the invention is not patentable.

As for Claims 2, 5, and 15, West et al. in view of Hinch teaches of claims 1, 3-4, 6-9, and 17-19

The difference between the claims and West et al. in view of Mulroy et al. is the claim recites: that the self-drilling anchor possesses a threaded shank portion that extends beyond its flange. Carlson et al. discloses a threaded fastener similar to that of West et al. in view of Mulroy et al.. In addition, Carlson et al. further teaches of a threaded shank, a flange, and a threaded shank portion that extends beyond its flange. It would have been obvious to one of

Art Unit: 3677

ordinary skill in the art, having the disclosures of West et al. in view of Mulroy et al. and Carlson et al. before him at the time the invention was made, to modify the flange of West et al. in view of Mulroy et al. to include a threaded shank portion beyond its flange, as in Carlson et al. One would have been motivated to make such a combination because it allows "a second thread adapted to threadingly engage a nut or other threaded member..." as taught by Carlson et al, in part 1, line 17.

Conclusion

[6] The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


The following patents are cited further to show the state of the art with respect to this particular type of drilling portion; as well as their extreme relevance to the current application as many read extensively onto the claimed invention: please see submitted notice of reference cited.

[7] Any inquiry concerning this communication or earlier communications from the examiner should be directed to David C. Reese whose telephone number is (571) 272-7082. The examiner can normally be reached on 7:30 am-6:00 pm Monday-Thursday.

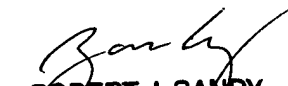
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J.J. Swann can be reached at (571) 272-7075. The fax number for the organization where this application or proceeding is assigned is the following: (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DCR


1/12/06

David Reese
Assistant Examiner
Art Unit 3677


ROBERT J. SANDY
PRIMARY EXAMINER